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1942
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UNITED STATES DEPARTMENT OF AGRICULTURE
Bureau of Agricultural Economics

In cooperation with

Cap 5

NEW YORK STATE DEPARTMENT OF AGRICULTURE AND MARKETS

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APPLE MANUFACTURES

THE USE OF APPLES IN CIDER MILLS,

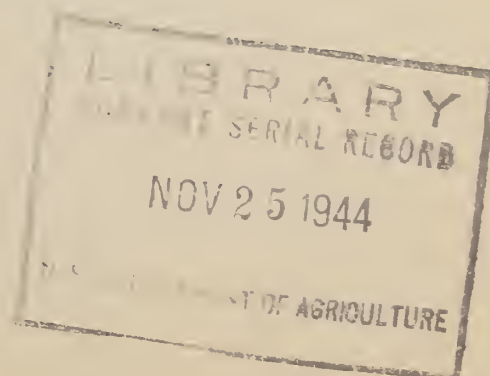
EVAPORATORS AND CANNERIES IN NEW YORK STATE

1937- 42

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Albany, New York
June 1943



APPLE MANUFACTURES - 1937-42

In total volume and farm value of apples used, the 1942 processing season in New York was outstanding. Even though the number of plants operating was the least in the six years of record, the quantity of fruit handled was second only to that from the 1939 crop. The gross farm value of the 7,887,200 bushels of fruit purchased for use in cider mills, evaporators, and canneries was about \$3,975,000., nearly three-fifths greater than that used in 1941 when the quantity was somewhat less and more than six times that included in 1938 operations when a light crop and low prices grossed about \$630,000. to growers.

The increase in apples used for canning and for evaporating in 1942 was of importance. The sharp increase in the drying of skins, cores, and pomace over that of earlier years indicated additional interest in saving pectin-bearing residues.

Unused facilities available for processing of apples are indicated by the fact that there were listed as not operating in 1940, 1941 and 1942 the following: Cider mills, 197 in 1940, 161 in 1941, and 230 in 1942; evaporators, 38, 30 and 26; establishments canning apples or carrying on similar processes, 13, 9 and 10 respectively. In the main, the closed establishments were generally those having relatively small capacity and many of them were probably poorly equipped.

The totals of apples and products are believed comparably complete from year to year. In each year there have been a few establishments from which reports have not been available. In those cases, estimates on the best available basis have been included. Minor revisions for 1941 are included here.

The cooperation of the owners or operators of the establishments who furnished information concerning their own businesses is acknowledged with appreciation.

(The Bureau of Markets of the Department of Agriculture and Markets gave cooperation in obtaining reports. The compilations were made in the Bureau of Statistics.)

R. L. GILLET, Director of Agricultural
Statistics and Senior
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Table 1.- Apples and apple products in cider mills, evaporators, and canneries, New York, 1937-42

Year	: Cider mills	: Evaporators	: Canneries	: Total
<u>Establishments in operation, No. 1/</u>				
1937	573	47	27	640
1938	452	29	22	500
1939	504	45	26	573
1940	383	19	27	427
1941	410	26	29	461
1942	315	42	27	374

<u>Apples received, net bushels 2/</u>				
1937	4,434,300	1,284,800	1,873,100	7,592,200
1938	2,621,800	373,900	866,200	3,861,900
1939	4,772,900	1,207,100	2,381,900	8,361,900
1940	2,309,000	199,400	1,686,600	4,195,000
1941	3,769,000	536,700	3,022,600	7,328,300
1942	3,578,700	1,099,900	3,208,000	7,886,600

<u>Quantity of apples, (included above) from other States, bushels</u>				
1937	9,600	=	1,000	10,600
1938	10,300	=	200	10,500
1939	6,800	=	600	7,400
1940	5,800	=	4,700	10,500
1941	11,700	=	5,800	17,500
1942	26,500	700	34,800	62,000

<u>Average price paid for apples, per 100 lbs. 3/</u>				
1937	\$.22	\$.33	\$.43	\$.29
1938	.26	.28	.58	.34
1939	.18	.27	.43	.26
1940	.28	.29	.75	.47
1941	.34	.57	1.19	.72
1942	.44	1.46	1.59	1.05

<u>Average date operations started and stopped 4/</u>							
	<u>Start</u>	<u>Stop</u>	<u>Start</u>	<u>Stop</u>	<u>Start</u>	<u>Stop</u>	
1937	Oct. 4	Dec. 1	Oct. 4	Dec. 5	Oct. 6	Dec. 9	
1938	Oct. 4	Nov. 30	Oct. 5	Nov. 16	Oct. 11	Nov. 18	
1939	Oct. 2	Dec. 6	Oct. 8	Dec. 19	Sept. 28	Dec. 7	
1940	Oct. 7	Dec. 7	Oct. 15	Nov. 28	Oct. 14	Dec. 17	
1941	Oct. 4	Dec. 6	Oct. 3	Dec. 9	Sept. 29	Dec. 18	
1942	Oct. 5	Dec. 4	Sept. 29	Dec. 22	Oct. 5	Jan. 3 (1943)	

Apples used for principal purposes:

<u>Used for cider, bushels 5/</u>				
1937	4,434,300	=	66,700	4,501,000
1938	2,621,800	=	9,000	2,630,800
1939	4,772,900	=	278,900	5,051,800
1940	2,309,000	=	69,100	2,378,100
1941	3,769,000	=	5,000	3,774,000
1942	3,578,700	=	10,000	3,588,700

Table 1.- Apples and apple products in cider mills, evaporators, and canneries, New York, 1937-42 - Continued

Year	: Cider mills	: Evaporators	: Canneries	: Total
<u>Apples used for principal purposes:</u>				
<u>Used for drying, bushels</u>				
1937	"	1,284,800	"	1,284,800
1938	"	373,900	"	373,900
1939	"	1,207,100	"	1,207,100
1940	"	199,400	"	199,400
1941	"	536,700	"	536,700
1942	"	1,099,900	"	1,099,900
<u>Used for canned apples and apple sauce, bushels</u>				
1937	"	1,657,700	"	1,657,700
1938	"	790,100	"	790,100
1939	"	1,987,800	"	1,987,800
1940	"	1,351,500	"	1,351,500
1941	"	2,580,600	"	2,580,600
1942	"	2,751,700	"	2,751,700
<u>Used for other factory products, bushels 6/</u>				
1937	"	148,700	"	148,700
1938	"	67,100	"	67,100
1939	"	115,200	"	115,200
1940	"	266,000	"	266,000
1941	"	453,000	"	453,000
1942	"	446,300	"	446,300
<u>Principal products made:</u>				
<u>Cider pressed, gallons 5/</u>				
1937	18,493,800	"	353,600	18,847,400
1938	10,662,000	"	146,000	10,808,000
1939	19,949,600	"	1,707,000	21,656,600
1940	9,336,400	"	627,600	9,964,000
1941	16,599,100	"	412,000	17,011,100
1942	16,575,400	"	311,600	16,887,000
<u>Apple juice, gallons 5/, 6/</u>				
1940	2,665,300	"	695,000	3,360,300
1941	2,814,400	"	806,400	3,620,800
1942	3,336,500	"	348,500	3,685,000
<u>Dried apples, pounds</u>				
1937	"	7,101,200	"	7,101,200
1938	"	2,147,700	"	2,147,700
1939	"	7,076,700	"	7,076,700
1940	"	869,000	"	869,000
1941	"	3,056,700	"	3,056,700
1942	"	6,473,500	"	6,473,500

Table 1.- Apples and apple products in cider mills, evaporators, and canneries, New York, 1937-42 - Concluded

Year	: Cider mills	: Evaporators	: Canneries	: Total
<u>Principal products made:</u>				
<u>Dried apple chops, pounds</u>				
1937	"	727,000	"	727,000
1938	"	192,300	"	192,300
1939	"	461,700	"	461,700
1940	"	469,400	"	469,400
1941	"	284,500	"	284,500
1942	"	356,700	"	356,700
<u>Dried skins and cores, pomace and waste, pounds 7/</u>				
1937	"	2,426,300	"	2,426,300
1938	"	104,000	"	104,000
1939	"	612,000	"	612,000
1940	"	454,200	"	454,200
1941	"	1,419,200	"	1,419,200
1942	"	3,587,100	"	3,587,100
<u>Canned apples and apple sauce, quantity of apples used for, bushels</u>				
1937	"	"	1,657,700	1,657,700
1938	"	"	790,100	790,100
1939	"	"	1,987,800	1,987,800
1940	"	"	1,351,500	1,351,500
1941	"	"	2,580,600	2,580,600
1942	"	"	2,751,700	2,751,700

1/ In a few cases operations of more than one type were carried on in a given establishment. The last column is the net number of establishments reporting, 7 joint operations having been noted in 1937, 3 in 1938, 2 in 1939, 4 in 1940, 4 in 1941, and 10 in 1942. "Custom" and "commercial" mills are included.

2/ Net receipts. Apples received at canneries and reported transferred to cider mills are included in cider mill receipts and not in cannery receipts. Of these there were reported, in bushels: 1937- 20,100; 1938- 8,100; 1939- 35,600; 1940- 28,700; 1941- 65,600; 1942- 94,100. Part of the apples were reported as bushels and part as pounds. One bushel assumed to equal 48 pounds. All of the data relate to the crop produced in the year indicated even though processing frequently runs over into the next calendar year.

3/ These prices are the average of "average or prevailing prices" as reported, excluding cases where the special uses called for unusual grades, etc.

4/ Includes averages of usual operations. In a number of cases, intermittent or unusual operations extended well into the following spring and are not included here. There is considerable difference in the length of the processing season at the various plants and in different parts of the State.

Footnotes Table 1 - Concluded

5/ Includes cider pressed from apple skins and cores. The quantity of apples used for cider in cider mills includes those used for "apple juice" in those establishments. No separate data were secured prior to 1940 when approximately 2,665,300 gallons of cider were sold as "apple juice", this term being equivalent to "sweet cider" in many cases, and about 29 percent of the total cider pressed in cider mills. In canneries, the "apple juice" first reported in 1940, is not included in cider pressed in those mills. In earlier years, apples used in canneries for "apple juice" were generally reported as used for products other than canned apples, apple sauce, and cider.

6/ Including "apple juice" at canning factories, but not in cider mills where apples so used are included with those for cider. Small amounts of loss and shrinkage are included. Among other products in which these apples are used are jelly, apple butter, mincemeat, food for infants, and frozen apples. In 1941, some apples were sorted out and sold to packers without processing.

7/ In 1941, dried skins and cores amounted to 595,300 pounds and dried pomace 823,900 pounds; in 1942, dried skins and cores 1,461,100 pounds and dried pomace 2,126,000 pounds.

Table 2.- Apples received at manufacturing plants, by districts, crops of 1937-42 1/

District	Cider mills	Evaporators	Canneries	Total
	1,000 bushels (net)			
<u>Ontario</u>				
1937	2,604	1,167	1,612	5,383
1938	1,305	347	798	2,450
1939	2,912	1,153	2,190	6,255
1940	1,131	166	1,545	2,842
1941	2,274	465	2,807	5,546
1942	2,046	945	2,942	5,933
<u>Mid-western</u>				
1937	324	88	200	612
1938	236	21	44	301
1939	392	20	141	553
1940	223	15	77	315
1941	265	32	111	408
1942	274	114	112	500
<u>Hudson</u>				
1937	554	"	"	554
1938	390	"	"	390
1939	467	"	"	467
1940	289	"	"	289
1941	336	"	"	336
1942	455	"	"	455
<u>Champlain</u>				
1937	14	"	"	14
1938	11	"	"	11
1939	15	"	"	15
1940	14	"	"	14
1941	22	"	"	22
1942	13	"	"	13
<u>Other</u>				
1937	938	30	61	1,029
1938	680	6	24	710
1939	987	34	51	1,072
1940	652	18	65	735
1941	872	40	104	1,016
1942	791	41	154	986
<u>State Total</u>				
1937	4,434	1,285	1,873	7,592
1938	2,622	374	866	3,862
1939	4,773	1,207	2,382	8,362
1940	2,309	199	1,687	4,195
1941	3,769	537	3,022	7,328
1942	3,579	1,100	3,208	7,887

1/ The districts here given include counties as follows:

Ontario Dist. - Niagara, Orleans, Monroe, Wayne

Mid-western Dist. - Erie, Genesee, Wyoming, Livingston, Ontario, Yates, Seneca, Tompkins

Hudson Dist. - Columbia, Dutchess, Putnam, Westchester, Greene, Ulster, Orange, Rockland

Champlain Dist. - Clinton, Essex

Other Dist. - All counties not included above.

Table 3.- Cider made, by districts, crops of 1937-42 1/

District	Cider mills	Evaporators	Canneries	Total
	1,000 gallons			
<u>Ontario</u>				
1937	11,619	-	354	11,973
1938	5,617	-	146	5,763
1939	12,758	-	1,707	14,465
1940	4,885	-	628	5,513
1941	10,958	-	412	11,370
1942	10,547	-	312	10,859
<u>Mid-western</u>				
1937	1,534	-	-	1,534
1938	896	-	-	896
1939	1,674	-	-	1,674
1940	867	-	-	867
1941	1,069	-	-	1,069
1942	1,128	-	-	1,128
<u>Hudson</u>				
1937	1,947	-	-	1,947
1938	1,412	-	-	1,412
1939	1,671	-	-	1,671
1940	1,020	-	-	1,020
1941	1,134	-	-	1,134
1942	1,652	-	-	1,652
<u>Champlain</u>				
1937	49	-	-	49
1938	33	-	-	33
1939	40	-	-	40
1940	46	-	-	46
1941	68	-	-	68
1942	41	-	-	41
<u>Other</u>				
1937	3,345	-	-	3,345
1938	2,704	-	-	2,704
1939	3,807	-	-	3,807
1940	2,518	-	-	2,518
1941	3,416	-	-	3,416
1942	3,207	-	-	3,207
<u>State total</u>				
1937	18,494	-	354	18,848
1938	10,662	-	146	10,808
1939	19,950	-	1,707	21,657
1940	9,336	-	628	9,964
1941	16,645	-	412	17,057
1942	16,575	-	312	16,887

1/ See footnotes, Tables 1 and 2 for explanations.

Table 4.- "Apple Juice", by districts, crops of 1940, 1941, and 1942 1/

District	In cider mills			In canneries			Total		
	1940	1941	1942	1940	1941	1942	1940	1941	1942
	1,000 gallons			1,000 gallons			1,000 gallons		
Ontario	1,234	1,197	1,521	695	794	347	1,929	1,991	1,868
Mid-western	289	322	180	-	-	-	289	322	180
Hudson	305	268	826	-	-	-	305	268	826
Champlain	15	33	23	-	-	-	15	33	23
Other	822	995	786	-	12	2	822	1,007	788
State total	2,665	2,815	3,336	695	806	349	3,360	3,621	3,685

1/ See footnote, Tables 1 and 2 for explanations.

Table 5.- Yield of apple products from 100 pounds of fresh apples 1/

Product and district	1937	1938	1939	1940	1941	1942
<u>Cider from 100 pounds of fresh apples, gallons:</u>						
Ontario	7.6	7.3	7.2	7.5	7.4	7.4
Mid-western	7.0	7.1	6.9	7.0	7.0	7.1
Hudson	6.9	7.1	6.8	6.9	6.7	6.9
Champlain	6.3	6.5	7.0	7.2	6.6	6.8
Other	6.6	6.6	6.6	6.6	6.8	6.7
State average	7.3	7.1	7.0	7.1	7.2	7.2
<u>Dried apples from 100 pounds of fresh apples, pounds:</u>						
State average	12.2	12.6	12.5	11.9	12.4	12.3
<u>Canned apples from 100 pounds of fresh apples, dozens No. 10 cans:</u>						
State average	.88	.85	.83	.84	.81	.79
<u>Apple sauce from 100 pounds of fresh apples, cases of 24 No. 2 cans:</u>						
State average	2.59	2.61	2.60	2.60	2.51	2.59

1/ The quantity of product reported as manufactured from 100 pounds of fresh apples varied rather widely. The above figures are averages of reports as received, except that for cider the state average is derived from the district averages by weighting by the quantity of apples received at cider mills in each district. If weighted by individual mills, the average yields would be somewhat higher, since in the large mills which handle a relatively large proportion of the cider apples, yields ranging from 8.0 to 9.7 gallons of cider per 100 pounds of apples were reported. See footnote, Table 2, for counties included in various districts.

Table 6.- Prices received for apples at manufacturing plants, by districts, crops of 1937-42 1/

District	Cider mills	Evaporators	Canneries	All
Per 100 pounds				
<u>Ontario</u>				
1937	\$.18	\$.33	\$.41	\$.28
1938	.23	.28	.57	.35
1939	.15	.27	.43	.27
1940	.26	.30	.74	.53
1941	.34	.59	1.19	.81
1942	.45	1.46	1.56	1.16
<u>Mid-western</u>				
1937	.24	.26	.52	.33
1938	.27	.25	.67	.33
1939	.19	.20	.46	.26
1940	.26	.25	.77	.39
1941	.34	.52	1.16	.58
1942	.42	1.42	1.74	.94
<u>Hudson</u>				
1937	.25	-	-	.25
1938	.26	-	-	.26
1939	.24	-	-	.24
1940	.34	-	-	.34
1941	.38	-	-	.38
1942	.40	-	-	.40
<u>Champlain</u>				
1937	.21	-	-	.21
1938	.46	-	-	.46
1939	.19	-	-	.19
1940	.30	-	-	.30
1941	.26	-	-	.26
1942	.31	-	-	.31
<u>Other</u>				
1937	.29	.40	.52	.31
1938	.33	.20	.80	.34
1939	.25	.18	.55	.26
1940	.33	.25	.94	.36
1941	.34	.35	1.26	.44
1942	.45	1.50	2.02	.74
<u>State average</u>				
1937	.22	.33	.43	.29
1938	.26	.28	.58	.34
1939	.18	.27	.43	.26
1940(revised)	.28	.29	.75	.47
1941	.34	.57	1.19	.72
1942	.44	1.46	1.59	1.05

1/ See footnotes Tables 1 and 2 for explanations. The prices reported for individual plants were "average or prevailing prices to growers during season." The averages given here, by districts, are simple averages of the reports received from the various plants within the districts. The state average and the average for all types of plants are derived from the district prices, weighted by the quantity of apples received in each district and type of plant. Bushel taken as 48 pounds of apples. R-118, 6-3-43, 700